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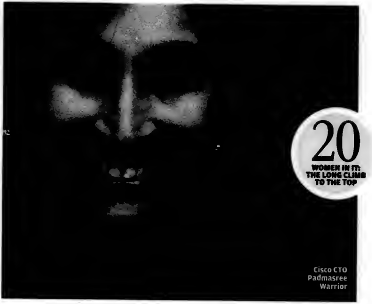
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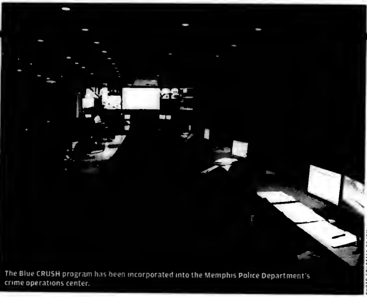
HeadsUp



The Blue CRUSH program has been incorporated into the Memphis Police Department's crime operations center.

PHOTO COURTESY OF IBM

PREDICTIVE MODELS

Police Use Analytics to Deploy Officers

MOST APPLICATIONS of predictive analytics are in the private sector, but police in Memphis are getting big results from using the technology to fight crime.

Several years ago, police there began developing a program called Blue CRUSH with assistance from the University of Memphis' criminology department.

It uses predictive analytics software from IBM's SPSS division to crunch information about what types of crimes are occurring, and where and when they're happening. Police use the resulting models to dispatch more resources to the neighborhoods that appear to need the most help. Blue CRUSH also uses a mapping program to highlight crime patterns.

The software models have dramatically changed policing in Memphis, said John Williams, manager of the police department's crime analyst unit. "This is more of a proactive tool than reacting after crimes have occurred. This pretty much puts [officers] in the area at the time they're being committed."

One Blue CRUSH operation in January focused on the city's Hollywood-Springdale area. It netted more than 50 arrests, and crime there has fallen 36.8%.

Overall, the Memphis Police Department has seen an 863% return on its investment and cut serious crimes by 15.8% since 2006, according to a study by Nucleus Research Inc.

Blue CRUSH is also boosting police officers' morale, because they're making more "quality arrests" of people who are repeat offenders, Williams said.

– Chris Kanaracus, IDG News Service

SECURITY MONITOR

New Malware Targets Utility Control Systems

Last month's disclosure of a sophisticated malware program targeting control system software from Siemens AG has renewed longstanding concerns about whether the U.S. power grid can withstand targeted cyberattacks.

The malware, called Stuxnet, exploits a Windows flaw to find and steal industrial data from supervisory control and data acquisition (SCADA) systems running Siemens' Simatic WinCC or PCS 7 software.

SCADA systems are used to control critical equipment at power companies, manufacturing facilities, water treatment plants and nuclear power operations.

Stuxnet is the first publicly known malicious software program written specifically to exploit vulnerabilities in a SCADA system.

The Trojan program appears to have been created for industrial theft but could just as easily have been used to sabotage a SCADA system, said Eric Knapp, director of critical infrastructure markets at NitroSecurity Inc.

The emergence of threats like Stuxnet drives home the need for more federal oversight of cybersecurity in the utilities sector, said Joseph Weiss, managing partner at Applied Control Solutions LLC.

"Hacking a control system does not take rocket science," Weiss said. "Protecting one does."

– JAIKUMAR VIJAYAN

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When an organization needs more computing power for today's memory-intensive workloads, the conventional wisdom is to buy more servers. This can lead to massive inefficiency and server sprawl, with the majority of servers today running at only 10% utilization.[1] As the computational demands of a smarter planet continue to explode, this sort of inefficiency has become a problem—a problem IBM engineers have now solved. The 5th generation of Enterprise X-Architecture® from IBM featuring the Intel® Xeon® Processor 7500 Series lets you add memory independently of the processor. As a result, IBM eX5 systems can leverage 6x more memory than current x86 servers, reduce storage costs by up to 97% and cut licensing fees by 50%.[2]

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1. McKinsey study: http://www.datacenterknowledge.com/archives/2009/04/15/mckinsey-data-centers-cheaper-than-cloud/. 2. Comparison of IBM System x3850 X5 + MAX5 with total 96 DIMMs x 16 GB for total 1.5 TB of memory vs. IBM System x3850 M2 with 32 DIMMs x 8 GB = 256 GB. Comparison of processor-based licensing fees on current Generation 4 processor systems with 64 DIMMs vs. the IBM System x3690 + MAX5. IBM eXFlash technology would eliminate the need for a client to purchase two entry-level servers and 80 JBODs to support a 240,000 IOPs database environment, saving up to 97% in server and storage acquisition costs. IBM, the IBM logo, ibm.com, X-Architecture, Smarter Planet and the planet icon are trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. A current list of IBM trademarks is available on the Web at www.ibm.com/legal/copytrade.shtml. Intel, the Intel logo, Xeon and Xeon Inside are trademarks or registered trademarks of Intel Corporation in the United States and other countries. © International Business Machines Corporation 2010.

BETWEEN THE LINES

By John Klossner

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ENTERPRISE SOFTWARE

CIOs Call for Maintenance Bill of Rights

A **USER COUNCIL** backed by Gartner Inc. last month urged vendors to adopt a "code of conduct" that addresses CIOs' biggest concerns about IT maintenance contracts.

Enterprise IT buyers are chafing at vendors' annual maintenance fees for software updates, bug fixes and technical support. For example, SAP AG's 2008 move to a pricier support service was met with considerable pushback, forcing the vendor to make some concessions. But for vendors, maintenance fees provide a steady stream of income, even when new license deals are scarce.

Gartner's Global IT Council for IT Maintenance, made up of CIOs and other senior IT leaders at large enterprises, issued a code of conduct that calls for the following:

- A right to regular, predictable updates to software products.
- Response times and support levels that match the application's "criticality."
- Annual fee increases that fall into "reasonable, predictable percentage ranges," as well as long-term caps on cost increases.
- The ability to stop or alter support at any time for products that aren't in use.
- Predictable and reasonable support levels for the entire life of a product or contract.
- Clear timelines for how long older software will be supported.
- Contracts with a detailed breakdown of exactly what kind of support the vendor will deliver and at what cost.

Analysts praised the initiative as a good start but said the code should add the right to get maintenance from third-party providers.

"Some vendors are attempting to preclude customers from seeking service and support from third parties," said Frank Scavo, managing partner at IT consulting firm Strativa Inc. "A customer-friendly maintenance contract should explicitly allow customers the right to go to a third party for software maintenance without jeopardizing warranties."

– Chris Kanaracus, IDG News Service

Micro Burst

In a survey of 178 IT executives,

52%

said that they plan to restructure their IT departments within the next three years.

INTERNET TRENDS

Global Brands Snap Up .co Domain Names

Originally, .co was just the Internet country code for Colombia. But now it's becoming a popular top-level domain for major global brands such as BMW, Canon, Honda, Nike, Nokia, Pfizer, Sony and Visa.

More than 39,000 organizations applied for .co domains during a "prelaunch" phase for signing up big-name companies, according to the official .co domain registry, .CO Internet SAS, which has headquarters in Miami and Bogota, Colombia. Last month, it started offering the domain to the general public through registrars and resellers.

The company is capitalizing on the difficulty of registering a meaningful name with the ubiquitous .com top-level domain, because virtually all common words and brand names have been taken.

Furthermore, the "co" in .co already has broad global recognition as shorthand for words like *company*, *corporation* and *commerce*, the registry said in a statement.

Overstock.com Inc. announced that it paid $350,000 to acquire "O.co" in an effort to target new audiences and make it easier for shoppers to find its Web site. Meanwhile, the political news site Politico is using Politi.co as its official URL shortener for Twitter.

– MITCH BETTS

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NEWS ANALYSIS

Wasted Space: IT Aims to Fill Disks

Large companies are slowly turning to thin provisioning technology and other tools in an effort to boost data utilization rates beyond 40%. By Lucas Mearian

AT THE TURN OF THE CENTURY, large data centers still relied mostly on direct-attached storage systems, which offer abysmal data utilization rates — 25% to 30% of hard drive capacity.

Since then, many enterprise IT managers have at least begun to study technologies that could vastly improve data utilization, like Fibre Channel, IP storage-area networks, thin provisioning and virtualization. A recent survey by TheInfoPro found that almost half of Fortune 1,000 companies now use thin provisioning or plan to do so.

Nonetheless, data utilization rates at most large companies remain at 40% or lower, resulting in a significant waste of electricity and floor space, analysts say.

"Most people I talk to don't even know how many terabytes of capacity they have on the floor, much less what the utilization is," said Andrew Reichman, an analyst at Forrester Research Inc.

Average storage utilization rates will remain in the 20% to 40% range until more IT managers start implementing the several storage management technologies available today, he added.

Over the past five years or so, thin provisioning, or provisioning only as much storage as an application server needs, has been among the most popular ways to boost IT storage utilization.

Slumberland Inc. has seen a significant improvement in data utilization since adopting the technology in 2004, said Seth Mitchell, an infrastructure team manager at the furniture retailer.

Since Slumberland installed arrays from Compellent Technologies Inc. with thin provisioning tools, the company's disk capacity utilization rate has reached 66%, Mitchell said. Without thin provisioning, the rate would hover around 30%, he estimated.

Texas Christian University, which rolled out a 3Par Inc. SAN with thin provisioning capabilities two years ago, has seen its data utilization rate increase to 50% of capacity, said Bryan Lucas, executive director of technology resources.

The university had previously used direct-attached storage systems, which Lucas said were easy to deploy and manage — until the school's server farm began to grow. "The direct-attached model didn't scale well," he said.

Gartner Inc. analyst Adam Couture suggested that corporate implementations of thin provisioning technology have likely been slowed by a flagging economy.

Comprehensive storage monitoring and reporting tools can cost $250,000 to $1 million, Reichman said, and in many cases a full-time employee is needed to manage such a system. ◆

Most people I talk to don't even know how many **terabytes of capacity** they have on the floor, much less what the utilization is.

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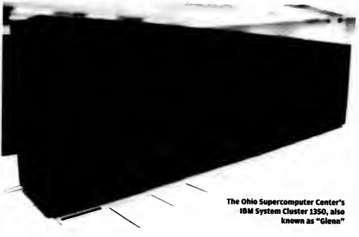

The Ohio Supercomputer Center's IBM System Cluster 1350, also known as "Glenn"

A weak, rocky economy makes on-demand services a lot more affordable than purchasing and maintaining a dedicated supercomputing cluster.

Supercomputing Grows in the Cloud

In a flagging economy, companies are slowly turning to on-demand services to get high-performance compute cycles without having to pay for high-end hardware. By Todd R. Weiss

AN ECONOMY that continues to stagnate could prove a boon to an increasing number of providers of on-demand supercomputing capacity.

The market for such services has so far grown slowly, said Charles King, an analyst at Pund-IT Inc. "But a weak, rocky economy makes on-demand services a lot more affordable than purchasing and maintaining a dedicated supercomputing cluster," he added.

Dan Olds, an analyst at Gabriel Consulting Group Inc., said on-demand supercomputer services can prove particularly useful to smaller businesses that need powerful processing but can't afford to buy high-performance computing systems.

More than 25 such businesses nationwide have directly participated in the Ohio Supercomputer Center's (OSC) Blue Collar Computing initiative, which sells supercomputing services to companies that have never used such high-end hardware. More than 250 additional companies have also used the services by accessing them through OSC partners, like the Edison Welding Institute (EWI), said Ashok Krishnamurthy, interim co-director of the Columbus, Ohio-based center.

EWI, a nonprofit industry organization, offers members access to E-Weld Predictor, a Web portal that lets users access the OSC's 1,650-node IBM supercomputer cluster, dubbed "Glenn," for tasks like simulating complex welds, Krishnamurthy said. "This simulates a whole bunch of prototypes, [cutting] the time it takes to create a welding process from six months to two weeks," he said. Typical workstations couldn't handle all of the calculations that are involved in such processes, he added.

The OSC supercomputer runs AMD Opteron multicore processors and IBM cell processors; it has a peak performance of more than 75 TFLOPS, according to OSC.

Woodward Governor Co., a maker of jet engine parts, signed a contract with a consulting firm this spring to gain access to supercomputers housed at IBM's Computing on Demand facility in Poughkeepsie, N.Y.

The contract follows Woodward's yearlong participation in a project funded by the Defense Advanced Research Projects Agency that was designed to show how small manufacturers can use high-performance computing technology to significantly speed industrial design and modeling projects.

During the pilot project, which was overseen by the University of Southern California Information Sciences Institute, Woodward used cloud-based supercomputing cycles to run complex software that quickly created and evaluated designs that could be incorporated into the production cycle without delay. The company estimated that the speedier process could lead to a savings of about $500,000 annually.

In addition to IBM, other companies that offer on-demand supercomputing include Silicon Graphics International Corp., which in February launched a service called Cyclone. And Hewlett-Packard Co., Intel Corp., Yahoo Inc. and others are in the process of testing a new public cloud dubbed Open Cirrus. ◆

Weiss *is a freelance reporter. Contact him at toddrweiss@gmail.com.*

PHOTO COURTESY OF OHIO SUPERCOMPUTER CENTER

THE Grill

Sridhar Vembu

This cloud pioneer debunks the myths of traditional education.

Title: Co-founder and CEO

Organization: Zoho Corp. (which was known as AdventNet until last year)

Locations: Pleasanton, Calif., and Chennai, India

Favorite book: *The Road to Serfdom*, by Friedrich Hayek

Who inspires you? Hayek; Bill Gates, for what he has done with Microsoft and his fortune; Dhirubai Ambani, founder of India's Reliance Industries; and N.R. Narayana Murthy, Infosys co-founder and its CEO for 21 years.

When I was a kid: I wanted to be a professional cricket player.

In high school my friends thought: I was a geek. In India, it's a term of praise.

SRIDHAR VEMBU, *the 41-year-old CEO of Zoho, an upstart maker of online applications, is an occidental software entrepreneur. After getting a doctoral degree from Princeton University, he went to work at Qualcomm when it was just a start-up. He says he would have stayed there but was drawn instead to the nascent Indian software business, and in 1996 he formed a company called AdventNet with two of his brothers and three friends. The company eventually built an IT management tool, Manage Engine, which remains its most profitable offering. But the company has become known for a broad suite of cloud applications called Zoho, and last year it adopted Zoho as its corporate name.*

Author and philosopher Friedrich Hayek isn't your typical inspiration for technology entrepreneurs. I read *The Road to Serfdom* right after college. It taught me how to have a light touch as a manager. It also taught me how to respect people's individual differences. People think of companies as command-and-control, and Hayek saw that command-

Continued on page 10

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Continued from page 8

control breaks down rather quickly. We know from practice that the person who is actually doing the job has the best information. So you have to give them considerable autonomy.

You say you wouldn't get a Ph.D. if you had it to do again. Why's that? When I came to the U.S., my goal was to be a professor. But during the course of my [studies], I got turned off by the way the academic world works.

There is a certain level of abstraction for its own sake, and even in engineering it's become true. The field is highly mathematical, almost to the point where the math has become a kind of Sanskrit — a tool to keep out people. Most of engineering is actually fairly common-sense and you can figure it out with the brain and hard work. Math is essential, but we've gone too far in that direction. It's become a kind of tool to show off.

Sanskrit was primarily the language of the priests. The IT world certainly has its own special languages and air-conditioned computer shrines. I don't see it that way. There is always a tendency to create a priesthood and exclude other people. But the IT world is the most open industry today, anywhere. Just to give a comparison: Biotech, medicine — anything related to health care — have all manner of priesthoods and guilds to keep people out.

Zoho's mostly a small-business tool. What's your experience in large enterprises? We face the same problems that large enterprises face. We have now about 1,200 employees, across three continents. It's become a fairly complex operation, far more than what I'd ever thought in the beginning. The Zoho suite is fully used inside, and we find substantial cost savings and productivity gains by using this.

We do have some big-company engagements. What we've seen so far is no big company is willing to throw out what they have and replace it with the cloud. Cloud computing is, to some extent, marketing, but there is something real going on here. The cost savings are real and tangible, and productivity gain is tangible. I believe the transformation to the cloud will happen over the next five or six years.

How does IT need to prepare for the cloud? We have built software that runs in people's data centers and built closed software. Now, we tend to break up software into little components because that scales better — in our spreadsheet, our macro functionality is a distinct subsystem. It does nothing but process macros. That's very different from the way you conventionally build software.

Then there's the business model disruption. Revenue models are very different. Traditionally, I came and sold you a huge package, and you spent a lot of capital and consulting dollars upfront and hoped and prayed it all worked out. In this model, the vendor assumes the risk.

Microsoft says it will be able to make the shift to the cloud. I don't necessarily disagree with that. Microsoft is never to be underestimated. But cloud computing is part and parcel of the broader phenomenon of the Web, and it's much more open. Microsoft's traditional boon was control of the stack. In this more open world, it's unclear how they are going to play.

You have your own university. Yes, Zoho University. We didn't see a lot of correlation with grades and job performance. So why go to colleges at all? Why not [recruit at] high schools? Look at Gates, Dell, Ellison, Jobs, Zuckerberg — they basically created the industry as it stands today. None of them actually finished college. Look at really good engineers: Some come from MIT and Stanford, and then there are people who had a couple years at community college. I really respect Google, but here I'm kind of un-Google. They believe in credentials, GPA, take this course. We don't.

Should IT departments try this? I really believe so. [Zoho University] is highly intensive training. [Attendees] spend eight to nine hours a day learning and experimenting. They mingle with people older than them, 23-, 24-, 25-year-olds, people over 30. Those values transmit to them.

Managing a bunch of college-age kids sounds like a nightmare. People complain that kids come out of college and don't have the right background, and I say they haven't really been challenged. A lot of education today takes a kid who's 18, 19 years old and asks them to focus on something really boring. [They're] not treated as the responsible young adults that they are. So they stay as kids and fulfill our expectations.

– *Interview by* **Michael Fitzgerald,**
a freelance writer based outside of Boston

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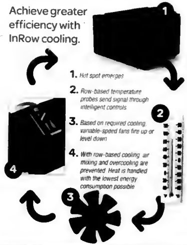

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OPINION

THORNTON A. MAY

IT's New Competency Is Getting to 'Next'

Eighteen months out appears to be the new definition of the future for many IT shops.

ONE OF THE most broken processes in IT today is planning. Fixing this is critical to the future of our discipline. I believe, in fact, that getting us to "next" should become IT's new core competency.

I am a student of the future. As an undergraduate, I became fascinated with how the people of antiquity dealt with the concept of the future. How a civilization thought about "next" often came to define its "now."

When Napoleon invaded Egypt in 1798, he had in his company a battalion of scientists, artists and engineers. Those 167 intellectuals and scholars represented the crème de la crème of the French intellectual establishment. One of those savants, Jean-Michel Venture de Paradis, was charged with analyzing how ancient Egyptians viewed the future. He concluded that "while Christians prayed for it, the Egyptians actually packed for it." He was referring to the habit of pharaohs to fill their pyramids with material they thought they would need for the next life.

During roughly the same epoch in which the pharaohs were building pyramids, in 210 B.C., the first emperor of China, Qin Shi Huang, packed for the future by creating the Terracotta Army, life-size funerary statues of 8,000 soldiers, 130 chariots with 520 horses, and 150 cavalry horses.

Both ancient China and early Egypt put a good deal of effort into preparing for what comes next. And both perceived what comes next to be very similar to what was happening then. This is where the modern world differs. One thing everyone today seems to be able to agree upon is that the future is going to be fundamentally different from the present. That makes packing for it more difficult.

Fuzzy Future

Over the past two years, I've asked people in our industry what they've been doing to prepare for what comes next. My research had two parts. I wanted to know how executives thought the future was going to differ from the present and, with that picture in mind, what they were planning to do about it.

Views of the future were all over the place and tended toward the fuzzy. That's perhaps to be expected at a transitional moment in history. Of more concern is the impact this endpoint ambiguity is having on IT planning processes — the way we articulate how we get from now to next. While human life expectancy is expanding, IT's view of the future is not. Bordering on extinction, it would seem, are the once very popular five-year outlooks. Disappearing fast are three-year views. Eighteen months out appears to be the new definition of the future for many IT shops.

One might assume that with a shorter temporal path to travel, IT planning would be simpler and more straightforward. That's not the case. I asked executives, "When your CEO hears the phrase 'IT plan,' what is the first thing that leaps to his mind?" One of the most common responses could be paraphrased as "car wreck." That is an image problem we have to fix.

As I've said before, the foundational elements of any legitimate IT planning process are these four must-knows:

1. Where are we?
2. Where do we want to go? (strategy)
3. How do we get there? (tactics)
4. How do we, the IT team, convince the enterprise to make the trip?

Crisp answers to these questions will put IT back on the track to trust. ◆

Thornton A. May is the author of *The New Know: Innovation Powered by Analytics* and executive director of the IT Leadership Academy at Florida State College at Jacksonville. You can contact him at thorntonamay@aol.com.

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CHIQUITA *Slips,* BUT DOES NOT FALL

The inside story of a 'painful' financial system overhaul that just might work. **By Robert L. Mitchell**

COVER STORY

FOUR YEARS AGO, Cincinnati-based Chiquita Brands International Inc. launched an ambitious, multimillion-dollar effort to consolidate its financial accounting systems and create a centralized budget planning and forecasting system. The company has three semi-autonomous units — bananas, salads and other food products — each of which has multiple lines of business worldwide.

It hasn't been easy, says Lisa Mullaney, former director of Chiquita's financial planning and analysis (FP&A) department, who guided the project through a number of challenges, including initial business-unit resistance, software bugs, delays and staffing shortages.

MICHAEL GLENWOOD ILLUSTRATION

"We've fallen off [deadline] quite a few times," she admits. But she adds, "Are we at a point where we have a clear line of sight? Yes."

The business performance management (BPM) system, built with Oracle Corp.'s Hyperion suite of tools, including Enterprise Performance Management System 11, finally went live last fall for Chiquita's 2010 budget cycle. However, the company's salad business continued to use its own tools for budgeting, and FP&A is in the process of redesigning the structure of the system. The forecasting function is expected to go live this month.

So the megaproject isn't finished, but Mullaney says the work is now "moving at light speed."

CIO Manjit Singh has a harder time seeing that level of progress. "The general perception is, we got it to work. But it was painful, and the [business-side managers] aren't necessarily looking at this as a successful implementation," he says. But corporate management likes the system — because it allows executives to get financial and operational data rollups.

"Once we start using it for forecasting, I'm hoping the reaction to the project will turn more positive," Singh adds.

Both Singh and Mullaney sat on the executive steering committee for the project, but their divergent perspectives reflect how differently IT and finance groups tend to view BPM projects.

The finance view: "This is an application and tool set that's owned by finance," says Mullaney. Unlike an ERP implementation, she says, a Hyperion tool set for financial planning is "not designed to be part of the IT structure."

The IT view: "This is viewed incorrectly as a corporate finance initiative. It affects all areas of the business," says Singh. "A Hyperion implementation can be as complex as an ERP implementation."

Both executives agree on the value of BPM software like Hyperion. Such tools allow the business to get to "one version of the truth" by moving everyone off the e-mailed spreadsheet merry-go-round for corporate budgeting and onto an integrated set of tools. All underlying assumptions that go into budgeting and forecasting within each line of business are visible to corporate finance, and results can be rolled up quickly and easily for corporate forecasting.

» Chiquita CIO Manjit Singh says implementing the Hyperion suite can be as complex as implementing an ERP system.

Selling the Business on BPM

Mullaney faced several challenges to the BPM initiative right from the start. The business units already had their own tools and ways of doing things and saw no reason to change. They viewed the BPM initiative as something that would benefit only the corporate finance group.

In addition, migrating to a centrally managed BPM platform would require extensive and potentially disruptive changes to existing business processes. Considerable time and effort would be required to understand, document and redesign those processes before the system could be fully designed and built. And with budgets lean, FP&A needed to rely on assistance from people within each line of business to get the job done.

"It's a difficult project to lead when it's global and when people were OK with what they were doing," Mullaney says. So she committed to making sure there was something in it for each line of business. That meant providing lots of financial detail in the system and "allowing folks to do an extremely granular analysis by line of business," says Xena Ugrinsky, a senior vice president at Titan Technology Partners LLC, the Charlotte, N.C.-based integrator that designed, built and now hosts the system.

But there was a downside to that approach. "It added a lot of complexity and resource coordination," says Mullaney.

Singh was skeptical. He'd been down that road three times, the first two at other companies. Each time, he says, Hyperion sold to the finance group and bypassed IT, which was called in to support the project after contracts were signed. "That immediately sets one up for conflict," he says.

For each project, he says, Hyperion and its consultants underestimated the complexity of the project, overpromised and ultimately underdelivered. Hyperion is a state-of-the art tool, but its complexity can't be overstated, Singh says. "This is always the case with Hyperion. It's so difficult to get one's arms around the complexity of the product as well as the process changes that go along with an implementation like this."

Those first two projects Singh had been involved with had failed, and over the summer of 2009, as the September go-live deadline of Chiquita's initiative loomed, he worried that this one might go the same way. "The industry really suffers from overambitious vendors, the ones that paint the rosy picture and can't deliver," he says. Oracle declined to comment for this story.

By the time Singh got involved in the project in 2008, the finance group had selected Hyperion software and integrator Pinnacle Group Worldwide. Hyperion was already in transition, having been bought out by Oracle in 2007. And Pinnacle was subsequently acquired by Titan Technology in July 2009, just two months before the new system's go-live date.

Singh immediately suspected that the expectations both vendors had set with FP&A were unrealistic — and he fretted that IT would get the blame.

One of the first decisions IT faced was whether to support the

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Who should lead a business performance management project: IT, finance or both? [illegible]

[illegible]

Continued from page 16

BPM infrastructure of about 40 servers internally or have Pinnacle host it. Singh worried about giving Pinnacle too much control, since it had missed deadlines during earlier phases of the project. He did agree to have Pinnacle host and maintain the system, but Chiquita purchased all of the hardware and software.

It also set up a secure MPLS connection between Pinnacle and Chiquita's data center and deployed the client software in its Citrix thin-client environment. "It's our hardware. We own all of the licenses and products. It's part of our network and domain," says Jack Ortman, director of technical support and architecture at Chiquita. "The way we did the implementation, it would not be tremendously difficult to move it back."

While Titan handled design, setup, integration, training and hosting, Chiquita's FP&A group retained control over some operational aspects of the Hyperion application, including ongoing configuration, design changes and application security. The complexity of the contract created confusion at times over who was responsible for what and required strong coordination among Titan, FP&A and IT to succeed.

IT also assigned a project manager, Julie Glick, to assist Shannon Burket, the hands-on manager at FP&A, who worked with the business units, Oracle, the IT team and the integrator to develop the system and manage resources on the project. "This is the only thing I've lived and breathed for the last two years," Burket said last fall when the system went live.

Burket's involvement started back in 2006, when she led a global review of finance processes. Her goal: Improve accuracy and reduce the timing window for forecasting. At the time, the company used Excel spreadsheets, a few Microsoft Access databases and an old Hyperion Essbase system that IT was no longer actively managing. "We really needed a new tool set," she says.

Chiquita's situation isn't unusual, says Nigel Raynor, an analyst at Gartner Inc. Most finance departments still rely on spreadsheets, and each business unit has its own "shadow" planning system that it uses internally. The business units forward spreadsheets to corporate finance, which must aggregate everything into "the mother of all spreadsheets," he says. As part of that process, the finance group must reconcile a mishmash of data, with no view into the assumptions underlying the numbers provided. "That's a terrible practice," Raynor says.

But there's a good reason why things get to that point, says Singh: BPM implementations are complex and expensive. As most companies grow, they develop a series of disjointed and disparate systems, putting off the expense of a full-blown BPM deployment until they're large enough — and the pain is great enough — to force change. "By the time you invest in the tool set, you have a very complicated financial structure," Singh says. For its part, Chiquita had to unwind and redesign 120 years of deeply ingrained business processes.

With just one other full-time person working on the project in FP&A, Burket needed part-time commitments from 40 people outside of the finance community, in the business units worldwide, to help with the transition. FP&A needed people who understood finance, systems and data — a combination of skills that's not easy to find. Those who did commit had other work to do; the finance project was not always the priority.

And while top management had approved a part-time commitment, not everyone was on board. "Because business units weren't as bought-into the benefits [as FP&A was], they weren't as eager to make those resources available," Singh says.

Training was another issue. Hyperion is a complex tool that requires extensive training — and retraining. "The first time you go [for training], you don't even know the questions to ask," Burket says. She strongly recommends holding multiple training sessions for users.

On the Bleeding Edge

Hyperion was acquired by Oracle during the early phases of the project, and a major upgrade to the Hyperion tool set — the first under Oracle — launched in June 2008. Chiquita decided to go with the new version, including the Hyperion Enterprise Performance Management Architect (EPMA) component.

It was a decision that would come back to haunt the team.

FP&A chose the EPMA release because new features in that module could potentially save Chiquita a lot of manual work. In

Continued from page 16

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FP&A chose the EPMA release because new features in that module could potentially save Chiquita a lot of manual work. In essence, EPMA functioned as a central repository for financial metadata across all Hyperion applications and facilitated the sharing of data. It automated the process of bringing in data from a variety of other systems — work that otherwise would have had to be done manually, says Ugrinsky.

But by using early-release software, FP&A was taking a risk. It didn't take long for Burket to realize that EPMA was very buggy. Delays ensued as the team struggled to work through the bugs — and to get Oracle to help, Mullaney says. (Oracle had no comment.)

By June 2009, the relationship was improving and issues were being addressed. Did Chiquita end up spending more time dealing with the new version of the software than it would have if it had done the data integration work manually with a more stable version? "Quite possibly," Ugrinsky admits. But at the time, the benefits seemed worth the risk of possible bugs.

Software wasn't the only area where Chiquita faced challenges. Singh says IT's relationship with Titan was a "roller coaster" as the systems integrator missed multiple deadlines. Each time, Titan would scramble to add resources to the project, as the contract required, but then it would miss the next deadline.

Titan seemed to be learning the ins and outs of the new version of the tool set along with the FP&A staff, says Singh, noting that he felt that individuals assigned to the Chiquita project early on lacked an adequate level of expertise. That may have been due in part to the fact that Pinnacle lost some people during the course of the project and during the Titan acquisition, says Ortman.

"Things are still running behind. We are in the process of doing an application redesign, because performance is not acceptable and we do still have some items that have not been completed," Singh said in late June. "Because we're doing an application redesign, it's safe to infer that we are still not that happy with the performance of Titan." (Titan didn't respond to requests for comment.)

At one low point in April of this year, Ortman says, there were "rumblings" that perhaps the project should be moved in-house. "We could eliminate hosting fees and MPLS connections," he says. "Even if we added an internal resource to do the work, I think there still may be some cost savings."

But Mullaney says the deadline issues are largely behind Chiquita now. "Are we on track for delivering in that short-term horizon? Yes," she says.

IT played a key supporting role with the integration work and lived up to the letter of its agreement, but Burket wishes the IT group had helped even more. "I got the support I needed, but we could have done things more quickly if we'd had a little more engagement [from IT]," she says.

But Singh says the project was led by FP&A and its integration partner -- with IT relegated to technical support for the hosted environment and data staging. "It was expected that the implementation partner would perform any and all development work. IT did not allocate development resources for integration activities," he says.

“

m[illegible]at [illegible]e continues to sell this as easy to install and deploy, and it's not.

MANJIT SINGH, CIO, CHIQUITA BRANDS INTERNATIONAL INC.

Seeing the Benefits

Chiquita's BPM system went live as planned for budgeting on Sept. 22, 2009, and now serves about 500 users worldwide.

The new system provides financial and operational metrics that benefit not only FP&A but the business units as well. For example, Chiquita's FP&A group previously had no insight into the fact that total volumes for shipments hinged on the assumption that ships were loaded to 95% of capacity. A drop to 80% of capacity increases costs, but no one in FP&A had the information necessary to understand why costs went up. "Those are the types of things that were locked into the Excel files," says Burket.

Individual business units are also seeing benefits. The company's North American transportation organization can now get reports about shipments on a weekly basis, instead of just monthly. And the salad business can now see a rollup of how much product gets discarded each week.

While the new system offers some benefits to each unit, individual lines of business must also give up some control. With the new system, for example, salespeople can no longer create new ship-to addresses for their customers — they must request that new addresses be created. That eliminates duplicate addresses but also creates delays of up to two days.

But on the whole, the results have been positive, Burket says. "It used to take a month to do a global overhead report," she says. Today, not only can that information be rolled up immediately, but the Hyperion tool set can provide a detailed analysis to find out, for example, why transportation costs went up.

By May, says Burket, individuals who were initially skeptical of the new system were starting to embrace it. "That's been a huge morale-booster for the team," she says.

Overall, the system has been a win for the lines of business and FP&A, according to Burket. "A standardized approach to planning and forecasting is bringing huge benefits to the company," she says. "I'm proud of what we did."

Epilogue

In late May, shortly after *Computerworld*'s last interview with the FP&A group, Lisa Mullaney left Chiquita. A successor has yet to be named. Shannon Burket continues to manage day-to-day operations of the system and the relationship with Titan. IT, says Singh, is ready to add resources to help with the transition. "We're going to step up and assign a project manager. We're going to redo some things, but we'll do that in close partnership with whoever steps up in FP&A," he says.

Singh says that in the wake of the challenges of the past two years, "people are more grounded on what needs to be done" and are making adjustments. "I'm confident we'll be up and running by the end of this year," he says. "It's just difficult getting there.

"This is what I've seen with all of these Hyperion projects," the CIO adds. "What irritates me is that Oracle continues to sell this as easy to install and deploy, and it's not. Companies need to be realistic about the time and resource effort it will take to have a successful implementation. It's all about process and change management. It's not about technology." ◆

Women in IT: The **Long Climb** To the Top

Despite unequal pay and cultural biases, more women are reaching the IT executive suite than ever before, and they're helping to pull up their female colleagues. **By Stacy Collett**

CAREERS

MEG McCARTHY remembers there being a quiet unease about women taking on high-level positions at the former Andersen Consulting when she began her IT career in 1980. "There was always a concern — though it was never formally expressed — could women balance work and home? But my view was always that I'm going to work harder than anybody else. I'm going to do more and get more out of every day than other people have the energy for," says McCarthy.

That singular focus on success helped McCarthy gain partner status at Andersen and then attain CIO positions at health care organizations. She is now is CIO and senior vice president of innovation, technology and service operations at Hartford, Conn.-based insur-

"People really appreciate if you're authentic, real and take pride in who you are as a person. [and] let that come through," says Cisco CTO Padmasree Warrior.

ance company Aetna Inc.

The path to the IT executive suite has widened to include more women than ever before. The percentage of women holding CIO or executive vice president of technology positions at 1,000 leading companies rose to 16.4% in 2009, up from 12% in 2007, according to recruiting firm Sheila Greco Associates LLC. Nonetheless, it's still uncommon for women to hold top-level IT jobs, especially highly technical positions like chief technology officer or research fellow.

Women in senior IT jobs are more likely to be in management than men are: 36.9% of female IT leaders hold management jobs, compared with 19% of male IT leaders, according to the Anita Borg Institute, a nonprofit group that works to increase the impact of women in technology. Conversely, men in the senior ranks of IT are significantly more likely to hold individual-contributor positions (80.6%) than are women (63.1%).

Management and technical careers involve different skills and place different demands on people. Success in management requires people to be accountable for a group's performance, and managers' performance evaluations are based on group results. Individual contributors must have specialized technical expertise, and they must be capable of setting the technical direction for a company's products; their performances are evaluated based on their own personal contributions.

First Person: **Padmasree Warrior**

Padmasree Warrior didn't have one fight-or-flight moment when she considered leaving the IT profession – she had several. Warrior, now CTO at Cisco Systems, explains how she overcame them:

"When I first started in semiconductor fabrication area, my immediate reaction was, 'I think I'm just going to work for a year, then go back to school and do my Ph.D. and continue to be in school,' because it was a safer environment. I had friends there, and it was a campus. Here, I am thrown into the real world! You overcome that and say, 'No, this is something I really enjoy doing – I like working with people and being with people.' You settle in.

"[The next moment came when] I got married and had a son. I was running the semiconductor factory – with three shifts and seven-day operation. I had a baby, and I thought, 'I don't know if I can do this. How can I have a job that requires me to be attentive to what I'm doing 24/7 and have an infant at home?' Then you find ways to be able to do it.

"Are you perfect at everything? No. I'm a perfectionist, and I always liked my home to be sparkling clean and everything had to be in its place. Then I realized that wasn't going to happen.

"When you have young children at home and you're trying to work and be a good parent, what causes the stress is the guilt associated with whatever decision you make, rather than the decision itself. If I was at work, I felt guilty that I wasn't home with my baby. If I was at home and I brought work home, then I would feel guilty that I wasn't working out and looking like a supermodel. Then if I did that, I would feel guilty that I wasn't working.

"The point is, you need to let go of the guilt. That's what helped me stay and continue my career. I have a very supportive husband and family who helped me in my first few years bringing up my kid.

"If you go back to what you are really passionate about, there are ways to work it out."

– STACY COLLETT

Challenges Persist

The Anita Borg Institute's Caroline Simard blames the disparity on a lack of mentors. "For some young women, when they look at the upper ranks, they see more women succeed in management, which sends a signal about where the opportunities for advancement are," says Simard, vice president of research and executive programs. "Once these women are in these roles, they start pulling up other women."

Padmasree Warrior, CTO at Cisco Systems Inc., considers herself lucky to be surrounded with other successful senior-level IT women at the San Jose-based company. Cisco's CIO, chief marketing officer, head of communications and a senior vice president in engineering are also women. But for Warrior, it wasn't always that way.

"I started my career in the semiconductor industry as a fabrication engineer. At the time, there were only three or four women in a workforce of thousands of engineers. My generation, we were taught to talk differently, act differently, even dress differently just to fit in and be 'one of the boys.' I feel that's not necessary for you to really be successful. People really appreciate if you're authentic, real and take pride in who you are as a person [and] let that come through," says Warrior, who is married and has a teenage son.

And yet despite so many successes at the top, women in the middle ranks are dropping out of IT, and fewer girls are pursuing IT careers. While some 74% of women in technology report "loving

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>
> **MEG McCARTHY,** CIO, AETNA INC

their work," these women leave their careers at a much higher rate than men, according to a study by the National Center for Women and Information Technology. Some 56% of technical women leave at the "midlevel" point, more than double the quit rate of men, at what is called a "fight or flight" moment, where they must decide whether they want to fight for a place in the organization or exit the profession.

Researchers blame the midcareer departures most often on the feeling of being left out of the predominantly male IT department culture, a lack of mentors, work/life imbalance and little access to the same types of networks that men enjoy.

Characteristics IT Women Share

What has kept successful female IT executives focused and moving forward through turbulent times? It starts with the right character attributes.

The Anita Borg Institute recently interviewed a small group of senior technical women who have achieved the highest levels of success. These women said that successful female IT executives have six key attributes: They're assertive, analytical, willing to take risks, collaborative, hard-working and unafraid to ask questions. As it turns out, those character traits are similar to ones that a similar study identified as being important to male executives.

It's no surprise that women in senior IT positions say that advancement requires long hours of hard work.

"Jobs at this level are 24/7, so you can't be in these jobs and have any other expectation," says McCarthy, who is single and has no children. This can be a barrier for women who seek advancement while juggling family responsibilities in dual-career couples. Nearly three quarters of the senior technical women surveyed by the Anita Borg Institute reported cutting back on sleep to advance their careers, and nearly one-third have delayed having children.

Assertiveness is something of a double-edged sword. Female IT executives are much more likely to describe themselves as assertive than women at the entry- and midlevels, according to the study. The women interviewed said they had to learn to be assertive because they're in a professional culture that rewards self-promotion and — some would say — borderline aggressiveness. However, women who speak up for themselves may have to pay a "likability penalty" for doing so.

"They're really stuck in this double bind, because if they don't behave assertively per the requirements of this culture, then they are seen as weak," Simard says. "But if they do behave assertively, they're not liked very much, so these women talk about having to modulate their level of assertiveness much more than men."

Kerri Grosslight, executive vice president for risk and compliance, technology and operations at Wells Fargo Inc., remembers being involved in situations in her early career where male counterparts acted overly aggressively. "I can't imagine acting like that myself," she recalls. But "depending on the value somebody may bring to the table, certainly there were circumstances where [those behaviors] were probably excused." While it's important not to be passive, she adds, there are more constructive ways to get your message heard. Grosslight is married with no children.

Wells Fargo's Kerri Grosslight says women can find constructive ways to make sure their message is heard.

McCarthy also found that she doesn't have to be aggressive to be heard. "I think it's about being competent — being able to present whatever it is that you're trying to diagnose or deliver in a very factual and appropriate fashion."

As for being willing to take risks, moderate amounts of that quality are an important part of leadership, and senior women and men are equally likely to perceive themselves as risk takers, which shatters the stereotype that men are more likely than women to take risks, according to the Anita Borg Institute study. Likewise, both women and men consider a collaborative work style to be a critical factor for success in IT.

The good news is that the job outlook for IT professionals is very good in this country. The computer science job market is expected to grow 32% in the next 10 years, and companies will need more women to take on IT roles, Simard says.

What's more, women today have a better chance of leading IT at larger companies. Research shows that small organizations have less-formalized hiring systems and diversity initiatives and often hire from social networks, "which tend to lead people to hire people who are like them," says the Anita Borg Institute's Simard. So while it's hard to change the culture in a large company, those companies also have more staffers overall and more formalized diversity programs.

Moreover, many larger enterprises have mentoring programs to ensure that women have appropriate opportunities and access to higher-level networks of both men and women.

"Companies need to realize that they can't expect women to mentor all the other women coming up the pike," Simard says. Men, too, must mentor women.

Companies also need to develop a culture of flexibility without penalty, according to the Anita Borg Institute. For example, telecommuting is becoming more acceptable, especially as workforces become more globalized — "but it must be used by men and women and at the higher levels to be accepted," Simard says.

How to Start Climbing

Women on their way up the IT career ladder need to work just as hard on their social and communication skills as they do on their technical expertise.

Self-confidence is the key to resiliency, yet women's confidence tends to erode early in their careers, according to Simard. For example, if a job opening required 10 skills, a woman would be likely to avoid applying for the position if she had only nine of the 10 skills, whereas a man would probably apply for the job if he had just five of them. "It's really important for women to build their own self-confidence and say, 'I can do this just as well as this guy,' " says Simard.

Networking is one of the largest predictors of advancement, yet a lot of young women think that hard work alone is what's needed to get ahead. Spend 10% of your time networking with both male and female peers and higher-ups, Simard advises.

And find a mentor. Mentoring relationships with both men and women can provide access to higher-level people and help determine a career path. Mentors also know the unwritten rules of advancement in a company.

Another tip is to develop a personal brand where you become very well known for specific qualities. "Become the go-to person within the company," Simard says. "For young women and midlevel women, ask yourself, 'What do I want to be known for?' "

And don't pass up opportunities to move laterally and gain experience, or to take on the "dirty job." Those can bring you a level of visibility along with valuable experience, Simard says. "There is a risk of failure, but if you can prove yourself by cleaning up the mess, then it's well worth it," she says. Beyond the potential for a promotion, you gain the opportunity to build relationships with those solving the problem with you. "Those are sometimes the most valuable relationships — that shared experience," Simard notes.

Finally, vote with your feet. "If they're feeling they're isolated, not advancing and have work-life situations that are especially difficult," says Simard, "women are in demand and they can go to another company." ◆

Collett *is a* Computerworld *contributing writer. Contact her at stcollett@aol.com.*

The Math Myth

Lecia Barker doesn't buy the pervasive argument that girls learn math and science differently than boys do, and that the difference ultimately turns off girls to these types of careers. In fact, today girls are outpacing boys in both subjects. "About half of math majors are girls, and two-thirds of biology majors are girls," says Barker, research associate professor in the School of Information at the University of Texas at Austin.

So, why don't more girls pursue careers in computer science, which typically flow from interest in math and science?

"Computer science courses are almost always optional and almost always populated by a majority of boys." Barker says. "Research shows that girls don't want to be path-breakers – to go into that classroom where there's only one girl and 18 boys."

But positive reinforcement from teachers and parents goes a long way in reshaping girls' opinions of computer science careers.

"We believe it requires actively recruiting. Anytime a teacher says, 'You're good at this. You ought to try it,' it plants a seed in the student's mind. It's an authority person, a smart person, having faith in their ability."

Teachers and parents must also tie in computer science with real-world applications and other areas of interest and meaning for girls, says Barker. "If you assume it's the girls who aren't interested in computer science, you're trying to solve the wrong problem."

— STACY COLLETT

[redacted]

BI Goes Mobile

Delivering business intelligence apps to employee smartphones can boost customer service.

By Michael Fitzgerald

EVEN BEFORE his company had finished developing its first mobile business intelligence application, Manoj Prasad was deep into planning the next one.

"We could immediately see [that mobile] would be big for us," says Prasad, vice president of enterprise architecture, global applications and testing at Life Technologies Corp., a multinational biotech toolmaker in Carlsbad, Calif.

In fact, Prasad made mobile BI a 2010 strategic priority for his department. His goal was to roll out mobile applications that would allow the 800-person sales force in the field to dive deeply into data about the cutting-edge tools Life Technologies develops and sells to scientific researchers.

Making analytic tools and data available on today's sophisticated smartphones can give companies the ability to interact in real time with their customers and business partners, thereby improving service and boosting productivity.

"All enterprise companies will start moving on the mobile path," Prasad predicts. He contends that this trend will be spurred on by improvements in smartphones' ability to display graphical information and the emergence of intuitive graphical interfaces that can better handle BI visualizations.

[redacted]

To be sure, mainstream adoption of mobile BI has been on the horizon for a while now. Two years ago, Aberdeen Group Inc. analyst David Hatch produced a report looking at best practices in making business intelligence available on mobile phones.

Only 17% of the companies Aberdeen surveyed at that time said that they were delivering business intelligence data to mobile phones, though 78% indicated that they were interested in doing so. It looked as though the trend would gain momentum, since several BI vendors had recently introduced mobile versions of their products.

But then the recession hit, and that stymied investment in mobile BI product development and marketing, Hatch says.

But the recession didn't stop the development of mobile gadgetry, most notably the iPhone, the iPad and the various Android phones. These new mobile devices can handle the complexities of BI, Hatch says.

Companies are responding aggressively. In a May 2010 Aberdeen survey, 23% of the 146 companies

Continued on page 26

EXECUTIVE VIEWPOINT

Keith Collins

SENIOR VICE PRESIDENT AND CHIEF TECHNOLOGY OFFICER, SAS

Keith Collins, Senior Vice President and Chief Technology Officer (CTO) at SAS, is responsible for driving corporate technology strategy through a focus on customer- and partner-facing activities. Collins led the effort to develop the company's breakthrough SAS Business Analytics Framework, and is responsible for the daily operations of Research and Development. He also oversees Information Services and Technical Support.

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The Optimal Approach to Nurturing Customers

Analytics. Predictive analytics. Advanced analytics. Analytics and optimization. Are they all the same? Why do they matter?
Analytics is not the same as simply slicing and dicing data. That is what's referred to as summary statistics. Analytics is using data to find the hidden information that helps companies make better decisions—like revealing opportunities for cross-sell and up-sell, or managing risk to expose threats sooner and anticipate future scenarios.

The three key dimensions of analytics involve discovery, prediction and optimization. These dimensions help us answer three important business questions:

How do I gain insights into better understanding my customers, prospects and the market?

How do I use those insights to reveal and predict what my best opportunities are?

How do I optimize for maximum efficiency and effectiveness?

For example, to be most effective in marketing you need to apply predictive analytics to: understand the customer's propensity to buy a product; select the right campaign and measure its success; score each customer in relation to that campaign; and then predict the results. Analytics also allows you to create multiple campaigns for different customers who have different scores. Therefore, you can optimize your approach to customer acquisition and retention.

As companies still struggle over the basics, what's the best approach to get started?
The challenge for IT execs—who generally lean toward a very structured approach to managing the operational systems of the business—is to embrace a more agile approach to business analytics. When analysts produce a report for senior management, a typical response is, "That's great, but what about *x* and *y* and *z*?" (This is *exactly* what good analysis leads to: a quest to better understand what's going on in the business.) However, this questioning is often seen as criticism, and fosters the concern that nothing is good enough.

Another commonality is to delay using analytics because of incomplete or unorganized data.

Analytics is an iterative process. Start by getting your first answer from existing data. Then, determine if you need more data to refine the answer, or formulate a new question based on the findings and pursue that answer. The process will lead you to define what data to ideally capture for analysis. Each new answer adds value. Strategically, analytics then becomes a closed-loop process that supports other business processes.

What are some of the application trends as more organizations 'compete on analytics'?
We've seen a real shift in how applications are being used, based on falling prices of computing power and storage, which is making high-performance analytics possible. This shift is part of a trend toward using dedicated appliances. Interestingly, the trend is occurring as we are using virtualization to maximize use of our generalized computing resources. In addition to leveraging high-performance computing, we are also making the most of computational capacity to dynamically evaluate the data and run multiple models simultaneously. This ultimately simplifies and accelerates finding the best possible outcome for the business.

What are some of the cool, new applications on the horizon for analytics?
We are working more with unstructured data, and believe it will have a big impact on customer relations. The context of data plays an important role, and as we better understand why certain data is being used in specific contexts, we can do in-depth analyses that produce greater insights. We are also focusing on time-series mining. Many organizations have untapped value in the time dimension of their data. With so much historical data available, new insights can come with them—to know *when*, not just *if*, likely events will happen, as well as see patterns over time that were previously unknown.

EXECUTIVE

VIEWPOINT

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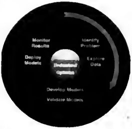

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Analysts **Bullish** On Mobile BI

Delivering business intelligence applications to employees' mobile devices will likely become a bigger phenomenon, analysts say. "Going forward, we'll see a whole slew of apps for sales forces and field service [teams]," says IDC analyst Stephen Drake.

He says the BlackBerry will still be used for BI, but he notes that more companies will develop applications for devices like Apple's iPad and for powerful new phones like the HTC Evo, which has a high-definition screen that makes it easier to analyze data on a mobile device.

Meanwhile, software providers have renewed their mobile BI push, with several of the big business intelligence vendors making moves in that arena: SAS added a Mobile dashboard in April; SAP recently introduced versions of its BusinessObjects Explorer for the iPhone and the iPad; and in June IBM showed off a spiffed-up new interface for its Cognos Go Mobile BI product.

In addition, the field has also attracted start-ups like Mellmo and Leapfactor Inc., which operates a cloud-based service that can bring corporate BI applications to smartphones.

Drake points out that network technology is catching up as well. That's a key development because "you couldn't use [mobile BI] over a 2G network," he says. "It used to be that you'd see these things and say, 'It looks nice in the demo, but am I really going to be able to use this?' Now the answer is yes."

– MICHAEL FITZGERALD

Continued from page 24

polled said that they now have a mobile BI application or dashboard in place, and another 31% said that they plan to implement some type of mobile business intelligence within the next year.

At Life Technologies, end-user demand pushed mobile BI to the top of the list of business strategies, Prasad says. In response, Prasad asked his architecture team to look for ways to get data from SAP BusinessObjects and IBM Cognos BI systems onto employees' BlackBerries and iPhones.

The team suggested Mellmo Inc.'s Roambi, a data visualization app that takes BI data from various sources and makes it iPhone- and iPad-friendly. Prasad asked an architect and a developer on his team to use Roambi to develop two reports — sales quotas and daily sales reports — that are important to Life Technologies' salespeople.

"I showed it to the CIO, and he got excited. And we showed it to some customers, and they got excited too," says Prasad.

A test version of a system showing daily sales reports taken from Life Technologies' Cognos data warehouse was rolled out this spring to some 50 salespeople with iPhones. Roambi doesn't work on BlackBerries, so Prasad's team plans to use the mobile version of Cognos to deliver similar functionality to the sales department's BlackBerry users.

Prasad already has his team working on other applications, like a global warehouse report, and has set up a mobile development architecture team to devise an entire mobile strategy for Life Technologies, with a particular emphasis on business intelligence.

Airport Data Takes Flight

If Life Technologies is a mobile BI newbie, Germany's Fraport AG counts as an experienced veteran.

Fraport, which runs Frankfurt Airport and several other airports worldwide, started a BI project six years ago, says Dieter Steinmann, senior manager of business systems there. The initial goal was to provide information from around the airport — data about flight departures and arrivals, wait times at security checkpoints, and reasons for delays — to employees in operations every five minutes, 24 hours a day.

In 2008, Fraport made that data mobile and delivered it to some 100 operations and customer relations managers at Frankfurt Airport, which served more than 50 million passengers last year and is Europe's third-busiest airport.

About 800 employees can now access information from a SAS Institute Inc. BI system via their phones. "When managers can get some actual information on the actual situation, it helps them make better decisions," says Steinmann.

For instance, through May of this year, 68% of the flights at Frankfurt Airport were on time. But that means that 32% of the flights weren't on time. Managers who meet with airlines to discuss the reasons for delays used to have to retreat to their offices to find data about delays affecting specific flights; they typically don't carry laptops into meetings, Steinmann says.

But they do carry BlackBerries, and now they can use those devices to instantly find out what happened to cause a delay, including whether the airline itself played a role. Knowing the answers immediately means that problems can be resolved faster.

Steinmann says that Fraport needed to do relatively little work to get the data from SAS 9 onto the BlackBerry platform — some XML coding and style sheets, worked up by a student intern who did the project as part of his master's dissertation. It was a "quick and not-very-expensive" way to do it, says Steinmann, who later hired the intern full time.

For the mobile version of the BI system, Fraport did need to limit the quantity of the information that would be made available, and it couldn't use as many graphics as it did in the desktop version.

But the managers took to it. Steinmann says they use it as a way to show customers, "I have the information you need, I have it right here, and I have it in color."

It also serves as a feather in the IT department's cap, he notes, since the application both looks good and works well. ◆

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Continued from page 24

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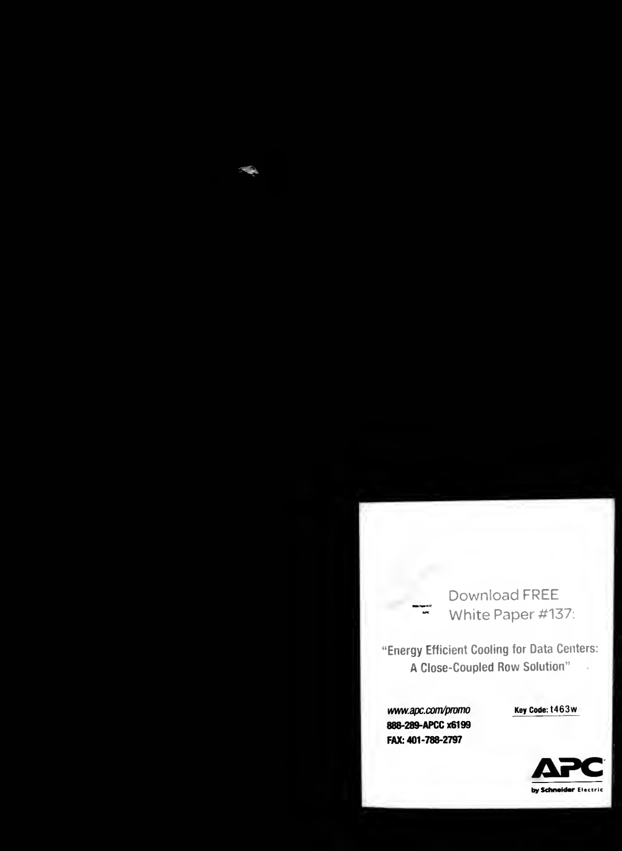

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Security Manager's Journal

MATHIAS THURMAN

Incident Shows IP Still at Risk

IT CAN TAKE a bit of luck sometimes to find out about a security problem. A recent incident illustrates this and the need to do more to eliminate luck from the matter.

I've talked before about how protective my company must be of its intellectual property, including service manuals for the equipment we sell, which can cost millions of dollars. We have a homegrown Web app that lets our field service engineers find and download service documentation, and last week the manager who administers that app asked me to stop by his office. The app creates a log entry whenever a service engineer clicks on a document for download. Normally, an engineer might download one or two documents a week. But while troubleshooting a user issue, the manager noticed that one IP address had logged an excessive number of downloads.

The discussions about security: **computerworld.com/blogs/security**

He determined that the IP address was in use by an engineer who had just resigned with the intention of going to work for a competitor. Needless to say, it all looked quite suspicious.

I immediately informed the HR department, and then I told the engineer's manager that I would want a forensic image of the employee's laptop. I wanted to know what he did with the 400 documents he downloaded. Unfortunately, the results were inconclusive. We couldn't be sure that he had copied the documents to external media or forwarded them to an outside e-mail account. If he had done eitber of those things from his laptop at home, we would have no way of finding out; our data leak protection tool catches such activity only when it occurs on our network.

True, the documents did reside on his company PC, but that is not a crime or grounds for termination. Nonetheless, we read him the riot act, telling him that if we found out that he had taken intellectual property, we would pursue both criminal and civil charges, and his eight-year employment record would be marked "not eligible for rehire." But with no noncompete clause in his contract, we could do no more.

SIEMs Like Old Times

This was all unsatisfactory except as a lesson for the future. It got me thinking about all the other data repositories that

Trouble Ticket

» [illegible]

» [illegible]

we have spun up to provide easy access to critical information, and about data correlation and security information event management (SIEM). Many years ago, my predecessor had bought a SIEM product, but that initiative was doomed by the complexity in our environment and by a lack of sufficient human resources. In another job, I had seen what successful SIEM deployment looks like; we used ArcSight, which I consider the Cadillac of SIEM. But I know that success requires a lot of money and people, both of which I am critically short on these days.

But if ArcSight is out of reach, I still feel I can get a limited amount of functionality, which may be enough to detect suspicious download behavior. I want to be able to show success in small increments and then use those successes to justify a more robust SIEM environment. I'll begin researching some of the smaller log management companies to see whether they can provide functionality such as analysis of Web, FTP and other application logs associated with our most sensitive data repositories. I want to be alerted when excessive downloading at a single IP address takes place. I want the tool to tell me the username or machine name with that IP address.

I'm not asking for much, just an automated approach to some basic log management and data correlation functionality. I know I can't be the first person to look for such tools and would encourage you to share your experiences in this area.

And who knows, perhaps this time next year, ArcSight will be within reach. ◆

This week's journal is written by a real security manager, **"Mathias Thurman,"** *whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com.*

Success with security information event management requires a lot of money and people that I don't have.

OPINION

BART PERKINS

Business Cases Aren't A Waste of Time

Some IT organizations use business cases as a way to avoid work.

ARE BUSINESS CASES just bureaucratic wastes of time and effort? My take has always been that business cases are valuable ways to describe and contrast potential project investments in order to make effective financial and business trade-offs. But the opposing view was voiced by several people at a recent conference. Do they have a point?

I don't think so. What they have instead, I suspect, is experience in IT organizations that use business cases as a way to avoid work. Asked if a new capability is possible, IT demands a business case before participating in discussions. Informal conversations and brainstorming are stymied by IT's refusal to have any substantive discussion on projects without a business case. These IT organizations are lazy and misguided, misusing business cases as a shield against doing productive work.

Properly used, business cases provide important information and valuable benefits. Among other things, they do the following:

- **Facilitate fact-based discussions.** Which is better: projects funded based on the presenter's emotion, volume and political power, or on facts, logic and detailed analysis? A business case captures relevant facts (such as scope, costs, timetable and risks) that promote unbiased business decisions. This fact-based approach reduces opportunities for personal or political attacks during funding discussions and protects against unnecessary bad blood between departments.
- **Enable enterprisewide trade-offs.** A standard business-case format helps the executive team determine objectively which investments provide the highest return, by ensuring consistent information and facilitating apples-to-apples comparisons. The fairness of this approach works against backroom horse-trading and backdoor, rogue projects.
- **Demonstrate the commitment of an executive sponsor.** Successful projects require an executive sponsor who acts as both cheerleader and champion. As the project's primary advocate, the executive sponsor should be actively — and *visibly* — involved in all aspects of the business case from early on.
- **Force scope and capability agreement.** Large programs are frequently broken into multiple projects or releases. Beneficiaries of the new capabilities sometimes become both enthusiastic and demanding and may "forget" that a particular capability was never intended for the initial release. A business case with a clear scope statement has saved more than one CIO from postimplementation attacks.
- **Form the basis for benefits tracking.** Well-written business cases include the specific, measurable benefits expected, as well as the metrics and processes needed to measure results. Improved results represent benefits realized. Get credit for the improvements your project has delivered!

Resistance to creating business cases for significant projects is ridiculous. Companies cannot afford to fund projects that will ultimately fail, wasting precious corporate resources. Comprehensive business cases ensure that project costs, risks and benefits have been appropriately evaluated before the first dollar is invested.

Business case analysis is a sound business practice that provides a solid foundation for business decisions, and a strong defensive weapon against opponents who might challenge the viability of your project. Or you could just return to the "squeaky wheel gets the funding" approach and take your chances. ◆

Bart Perkins is managing partner at Louisville, Ky.-based Leverage Partners Inc., which helps organizations invest well in IT. Contact him at BartPerkins@LeveragePartners.com.

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[illegible] FERNANDA

'Hello? No, I'm not busy. I'm just at a job interview.'

If you're heading to a job interview, turn off your phone. Taking a call during an interview is one of the gaffes that hiring managers cited most often in a recent CareerBuilder survey about irksome habits of interviewees. Over 2,700 hiring managers responded to the online survey. Here are some of the behaviors that bother them:

- **Dressing inappropriately** (57%)
- **Appearing uninterested** (55%)
- **Speaking negatively about a current or previous employer** (52%)
- **Appearing arrogant** (51%)
- **Answering a cell phone or texting during the interview** (46%)
- **Failing to provide specific answers** (34%)
- **Not asking good questions** (34%)

SOURCE: CAREERBUILDER.COM, MARCH 2010

IT Job Growth: Down but Not Out

The U.S. Department of Labor's Bureau of Labor Statistics reports that all IT occupations experienced a growth rate of 36% from 1999 through 2008, compared with 6% for all occupations in the U.S. Not surprisingly, programming jobs were the one dark spot, experiencing a 25% decrease during that period. The BLS is projecting lower rates of growth for most IT occupations for the 2008-16 period, much closer to overall job growth, but with programming moving back into positive territory. **Here are the percentage changes in U.S. IT employment from 1999 to 2008, and projections for 2008 to 2016:**

	1999-2008	2008-16
Network systems and data communications analysts	134%	74%
Systems software engineers	83%	[illegible]
Application software engineers	72%	48%
Network and systems administrators	60%	[illegible]
Support specialists	18%	14%
Systems analysts	14%	[illegible]
Database analysts	14%	33%
Computer information scientists, research	1%	[illegible]
Programmers	-25%	6%
All other computer-related jobs	47%	[illegible]
All IT occupations	36%	25%
All occupations	6%	[illegible]

SOURCE: U.S. BUREAU OF LABOR STATISTICS

What Matters in IT

CIOs were asked which IT roles had increased or decreased in importance over the past two years. **Here are the percentages of respondents who said these roles' importance had "increased" or "significantly increased":**

Business analysis	70%
IT strategy and planning	[illegible]
Architecture	66%
Project management	[illegible]
Security	62%
Service management	[illegible]
IT financial management	55%
Client relationship management	[illegible]
Business continuity	55%
Portfolio management	[illegible]
Asset management	34%
IT research	[illegible]
Human resources (within IT)	20%

SOURCE: FORRESTER RESEARCH INC.'S 2009 GLOBAL IT STAFFING ONLINE SURVEY, WITH RESPONSES FROM 128 CIOs FROM FORRESTER'S ONGOING IT RESEARCH PANEL

Career Watch

© FOTOLIA / FERNANDA

'Hello? No, I'm not busy. I'm just at a job interview.'

If you're heading to a job interview, turn off your phone. Taking a call during an interview is one of the gaffes that hiring managers cited most often in a recent CareerBuilder survey about irksome habits of interviewees. Over 2,700 hiring managers responded to the online survey. Here are some of the behaviors that bother them:

- **Dressing inappropriately** (57%)
- **Appearing uninterested** (55%)
- **Speaking negatively about a current or previous employer** (52%)
- **Appearing arrogant** (51%)
- **Answering a cell phone or texting during the interview** (46%)
- **Failing to provide specific answers** (34%)
- **Not asking good questions** (34%)

SOURCE: CAREERBUILDER.COM, MARCH 2010

IT Job Growth: Down but Not Out

The U.S. Department of Labor's Bureau of Labor Statistics reports that all IT occupations experienced a growth rate of 36% from 1999 through 2008, compared with 6% for all occupations in the U.S. Not surprisingly, programming jobs were the one dark spot, experiencing a 25% decrease during that period. The BLS is projecting lower rates of growth for most IT occupations for the 2008-16 period, much closer to overall job growth, but with programming moving back into positive territory. **Here are the percentage changes in U.S. IT employment from 1999 to 2008, and projections for 2008 to 2016:**

	1999-2008	2008-16
Network systems and data communications analysts	[illegible]	[illegible]
Systems software engineers	[illegible]	[illegible]
Application software engineers	[illegible]	[illegible]
Network and systems administrators	[illegible]	[illegible]
Support specialists	[illegible]	[illegible]
Systems analysts	[illegible]	[illegible]
Database analysts	[illegible]	[illegible]
Computer information scientists, research	[illegible]	[illegible]
Programmers	[illegible]	[illegible]
All other computer-related jobs	[illegible]	[illegible]
All IT occupations	[illegible]	[illegible]
All occupations	[illegible]	[illegible]

SOURCE: U.S. BUREAU OF LABOR STATISTICS

What Matters in IT

CIOs were asked which IT roles had increased or decreased in importance over the past two years. **Here are the percentages of respondents who said these roles' importance had "increased" or "significantly increased":**

Business analysis	[illegible]
IT strategy and planning	[illegible]
Architecture	[illegible]
Project management	[illegible]
Security	[illegible]
Service management	[illegible]
IT financial management	[illegible]
Client relationship management	[illegible]
Business continuity	[illegible]
Portfolio management	[illegible]
Asset management	[illegible]
IT research	[illegible]
Human resources (within IT)	[illegible]

SOURCE: FORRESTER RESEARCH INC.'S 2009 GLOBAL IT STAFFING ONLINE SURVEY, WITH RESPONSES FROM 128 CIOs FROM FORRESTER'S ONGOING IT RESEARCH PANEL

Q&A

Selena Rezvani

The author of **The Next Generation of Women Leaders** *discusses how women can get to the top in the workplace.*

In the course of conducting interviews for your book, what did you learn about what women have to do to advance their careers? First, you can't be naive about the extent to which politics govern the workplace. The women I interviewed found ways to proactively learn the culture and political climate of their organizations, learning how people like to be communicated with, and how and when people launched initiatives that were successful. They solicited information from several parties as they accumulated information, never relying on just one.

Women who make it to the executive ranks also take professional risks before they feel ready for them. The day when we can say "Now I feel ready" is usually too late – others have claimed the opportunity we wanted. Women executives make it a habit to ask themselves, "What do I need to be comfortable enough to do this?" or "What can the organization do to facilitate my success?"

I also learned that women executives communicate in a specific way. They use emotional intelligence to read people and situations, but they don't use emotions when making a case for something. When building your argument or making a case, said the executives, keep things fact-based, not innuendo- or hearsay-based, using phrases like "The data shows. . ." and "The facts are. . ." rather than "I feel. . . ."

Perhaps most important, those women that make it to the top continually ask for what they want at work, rather than waiting to be noticed, rewarded or promoted. They're not afraid that their requests will inconvenience someone or that they will look pushy for asking. The best way to make a request is to figure out where you have leverage – the value you bring to your employer and the extent to which you're relied upon for your skills.

How do those things differ from what men do? Boys are reared with more of an emphasis on risk-taking and being brave, whereas young girls tend to get positive reinforcement for being nice. As adults, we bring this into the workplace. And for women, it can mean that we're less likely than men to negotiate for what we want and to take necessary risks at work.

The IT industry in particular has a dearth of women. Do you have any advice for women trying to distinguish themselves in an extremely male-dominated field? In a field with few women, you need to work harder than most to find mentors you can relate to. First, look within your organization to see who, male or female, has a great brand and reputation. Adopt them as a mentor, ask them how they do it, and look outside the organization as well. I always tell my coaching clients to build a personal board of directors who can help them with different facets of their careers. One might help you with your image, another might help you build your technical skills, yet another may know key contacts in your field. Since so few people actually build a personal board of directors and leverage this team for their advice, experience and breadth of knowledge, doing so will give you an immediate edge on your peers.

– JAMIE ECKLE

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TRUE TALES OF IT LIFE AS TOLD TO SHARKY

HAL MAYFORTH

Maybe the Printout Could Be a Sail

Pilot fish at this government agency gets orders to set up a large plotter that has been moved to his building. He gets it working, then calls the user who most regularly prints on the machine to have him run a test drawing. User tells fish, "OK, I'll meet you in the lobby in about 10 minutes." He must be in the middle of something, fish figures. So fish takes care of a few items on his own to-do list, then heads down to the lobby – where he sees the user walking in through the front door. Sorry, fish says, have you been out? "Oh, no," says user. "I work down the road at headquarters." Hmm, says fish. I know it's a big printer, but isn't there space for it down there? "Yes, there's plenty of room," user replies. "But the boss says that it's too ugly and doesn't fit in with the office's aesthetic." Sighs fish, "So every time he needs to use the printer, he has to walk down the road to our office to collect a very large-scale drawing. That's going to be interesting come the winter!"

Priorities

There are two printers supporting the dozens of workers in this office – and one day a pilot fish notices that one of them won't print. "There was a hand-lettered sign on the printer that said it wasn't working," fish says. "Since we have desktop notification software, I wondered why the IT folks hadn't sent out a notice. But I didn't give it much more thought than that." Two months later, the printer is still broken, but the notification system seems to be working fine, because fish gets a message reporting that one of the plastic "men" on the foosball table in the break room has snapped off. "Less than 10 minutes later, another broadcast states that one of our IT guys had repaired the foosball table," says fish. "Another two months go by. The printer is still broken. I have to submit an unrelated help ticket, and I notice the scrolling banner in the help tool. It's still assuring everyone that the foosball table has been repaired."

We'll Spell It Out For You

This IT shop has cooperation issues between the networking and help-desk groups, so the CIO pilot fish calls a meeting to do some team-building. And it works. "I finally got them to see things from the other group's perspective," says fish. "In closing, I reminded them that working as a team is the best way to get things done. The director of the networking group had to get the last word in by saying, 'Yeah, remember, there's no *I* in IT.' There was a pause as everyone looked around at each other. Then I replied, 'Actually, there is one – standing prominently in front of the T.' We all laughed – except him."

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OPINION

SCOT FINNIE

The New IT

One thing that I know is that companies need to try new ways of buying and implementing technology.

MOST IT ORGANIZATIONS probably feel that they've passed through fire, water and ice over the past couple of years. The steepest economic downturn in decades has transformed IT in ways that aren't yet fully evident. But one thing's for sure: IT's business as usual is *not* coming back. (And it could be that the recession just hastened the inevitable.)

The new IT was born of three hard realities:

1. The recession was painful for IT. As budgets were slashed, IT infrastructure was an albatross around the necks of some CIOs. IT leaders want highly flexible alternatives that let them expand or contract capacity as market conditions dictate. As *Computerworld's* Patrick Thibodeau put it in an e-mail to me recently, IT managers "don't want to be caught, *ever again*, as they were in 2008-2009 when they were forced to make deep cuts. They want to redesign their IT infrastructure with built-in variability." The tricky part is to do that without damaging or killing key initiatives.

2. Cloud is a real alternative (like it or not). One way to get that variability is by provisioning your IT operations, at least in part, with cloud or software-as-a-service systems. As it happens, SaaS-based enterprise applications and infrastructure are no longer novelties. They've become real alternatives for some IT organizations. To be sure, they still have their drawbacks. But with IT finding its way into virtually every facet of business, and with business product cycles shrinking, you can't afford to choose any option that lengthens IT implementations. There are times to build key systems and times to buy them, but when you need technology *now*, it's faster to lease it. Utilizing SaaS or cloud is also cheaper in the short run because there's no upfront capital expense.

3. IT *is* business. The term "business alignment" has been bandied about by pundits for more than a decade — while most of us were getting real work done. Well, here's another byproduct of the economic downturn: Advanced IT shops no longer think of themselves merely as cost centers. Want to hang on to your budget? How about generating some revenue? Julia King's May 24 cover story, "Beyond Alignment," made that point well. There are cutting-edge organizations — such as Zappos, Progressive and Southwest Airlines — whose IT departments are ahead of that curve. Whether your company embraces that trend sooner or later, this is no longer just a theory.

So, what is the new IT? In the next issue of *Computerworld*, we will attempt to illuminate the future of IT. We'll explore what the profession will look like in 2020, and what companies and IT shops need to do to get there.

One thing that I know is that companies need to try new ways of buying and implementing technology. They need to teach IT people how the company makes money. Today, every employee is a business person, and IT employees have skills that may help them make mental leaps that lead to powerful ideas and new revenue streams. Traditionally, IT employees haven't been trained or encouraged to think that way. What I hear from CIOs and IT executives is that many, perhaps most, CEOs aren't supporting their IT leaders in taking the risks that will lead to IT profitability.

In the new IT, executives won't limit themselves to the way things were done in the past. The business of IT today is about taking steps forward without breaking the bank, trying new ways of doing things that save — or *make* — money, and choosing options that don't lock you into a big contract. It's difficult, because in many ways it's a reinvention of IT. But that's what makes it exciting. ◆

Scot Finnie is *Computerworld's* editor in chief. You can contact him at sfinnie@computerworld.com.

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[1] Source: IDC white paper sponsored by HP *Gaining Business Value and ROI with HP Insight Control*, May 2009.

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